

Atty Dkt. No.: 10971150-2
USSN: 10/080,641

REMARKS

In view of the following remarks, the Examiner is respectfully requested to allow Claims 32, 33, 36-38, and 43-58, the only claims pending in this application.

Claims 32, 38, 43, 47 and 52 have been amended. Support for these amendments may be found throughout the specification and claims as originally filed, for instance at page 16, lines 16 – 19. New Claims 53 – 58 have been added. Support for Claim 53 can be found at page 11, lines 2 – 23. Support for Claim 54 can be found in FIG.s 6 and 7. Support for Claims 55 – 58 may be found at page 10, lines 4 – 9. Accordingly, the amendments add no new matter and their entry is respectfully requested.

As an initial matter, the Applicants respectfully request that the Examiner confirm that the action mailed on September 16, 2005 is non-final (despite the "Final" box on the Office Action Summary Sheet being checked). As amendments to the claims were entered on filing of the RCE and the Examiner has raised new grounds for rejection in the most recent Office Action subsequent to the filing of the RCE, it is believed that the "Final" box was checked in error and that the present office action is, in fact, a non-final Office Action.

Claims 32, 33, 38, 43, 44, and 47-50 have been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Peters (US 6,118,532) in view of Kaye (US 3,850,525) and Modell, et al. (US 6,826,422 B1) and in further view of *In re Venner*, 262 F.2d 91, 95, 120 USPQ 193, 194 (CCPA 1958).

The Examiner acknowledges that none of the cited references teach a processor for correlating the detected data with the respective biopolymeric features on the array. As stated in the September 16, 2005 Office Action, "neither Peters nor Kaye or Modell

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et al teach a processor as claimed. See page 4. However, citing *In re Venner*, 262 F.2d 91, 95, 120 USPQ 193, 194 (CCPA 1958), the Examiner asserts that the Courts have established that merely using a computer to automate a known process does not impart non-obviousness to an invention. The Examiner then goes on to state that the Courts have established that if the difference between the prior art and the claimed invention is limited to descriptive material stored on or employed by a machine having no functionality related to the substrate, the descriptive material will not distinguish the prior art in terms of patentability. The Examiner therefore concludes that it would have been obvious, in light of *Venner*, to have included a processor for storing and analyzing signals received from an apparatus of Peters in view of Kaye and Modell.

As to the Examiner's contention regarding the application of *In re Venner* to the facts of the present case, *In re Venner* stands for the proposition that it is not inventive to provide a mechanical or automatic means to replace a manual activity which accomplishes the same results as disclosed in the prior art. *In re Venner*, 262 F.2d 91, 95 (CCPA 1958). In *In re Venner* the only difference between the claimed invention and the prior art was the presence of an automatic actuation means, where the prior art had relied on manual actuation. In other words, all of the different elements of the claim were present in the prior art, and the applicant merely used known elements to automate a process that was performed manually in the prior art.

In contrast, the processor of the present claims does not merely automate a process that was manually performed in the prior art. None of Peters, Kaye or Modell teaches a process of receiving signals and correlating received signals with biopolymeric features on an array. Therefore, the processor element of the claims does not provide for the mere automation of a known process. As such *In re Venner* does not apply to the facts of the present situation.

The Office has not given any weight to the processor as claimed because the Office contends that the Applicants' assertion that the "processor functions to analyze

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the detector signals in such a way as to correlate them within distinct biopolymeric features that have been deposited on the array" is not supported by the specification or claims. However, the Applicants' would like to draw the Examiner's attention to the specification which teaches that the control unit is suitably programmed to execute all of the steps required during operation. See page 16, lines 16 to 18. Furthermore, as set forth in originally filed Claims 32 and 38, the processor (e.g., control unit) receives signals from the detector system and correlates the received signals with respective array features. As such, the claimed processor is fully supported by the specification as originally filed.

Because the cited references fail to teach or suggest a processor programmed to receive signals from a detector system and correlate the received signals with respective biopolymeric features of an array, and the steps performed by such programmed processor do not amount to the mere automation of a known process of the prior art, Claims 32, 33, 38, 43, 44, and 47-50 are not obvious under 35 U.S.C. § 103(a) over Peters in view of Kaye and Modell and in further view of *In re Venner* and this rejection may be withdrawn.

Claims 36, 37, 45, 46, 51 and 52 have been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Peters in view of Kaye and Modell, in view of Roustaei (US 6,123,261), and further in view of *In re Venner*, 262 F.2d 91, 95, 120 USPQ 193, 194 (CCPA 1958).

With regard to the subject claims, the Examiner states that Peters, Kaye and Modell fail to teach: (1) a processor which receives signals from the detector system and correlates the received signals with respective array biopolymeric features; (2) a reader to read a code carried by an array unit; and (3) a scanning system which scans the interrogating light spot across the array. To fill these deficiencies, the Examiner contends: (a) that the processor which receives signals from the detector system and correlates the received signals with respective array biopolymeric features would be

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obvious in light of the Courts' ruling in *Venner*, and that (b) Roustaei teaches an optical scanning device system for reading encoded information comprising a scanner reading device and a processor used to decode scanned data.

As reviewed above, the combined teachings of Peters, Kaye and Modell fail to teach or suggest an apparatus that includes a processor programmed to receive signals from a detector system and correlate the received signals with respective biopolymeric features of the array. Furthermore, there being no teaching in the references of a manual process of correlating a signal with respective biopolymeric features of an array, the processor does not merely automate a prior art manual process. Because Roustaei was cited solely for its teachings of an optical scanning device system for reading encoded information, it fails to meet this deficiency.

Accordingly, because the cited references fail to teach or suggest each and every element of the claimed invention, namely a processor programmed to receive signals from a detector system and correlate the received signals with respective biopolymeric features of an array, and the programmed processor of the claims does not merely automate a known process, Claims 36, 37, 45, 46, 51 and 52 are not obvious under 35 U.S.C. § 103(a) over Peters, Kaye and Modell, in view of Roustaei, and further in view of *In re Venner*.

Claims 32, 38, 43, and 47 have been rejected under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the written description requirement. The Office contends that the terms "biopolymeric moieties" and "biopolymeric features of the array" are not supported by the specification as originally filed. In response, the Applicants would like to draw the Examiner's attention to the specification at page 6, lines 1-3 wherein is stated:

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"while the methods and apparatus may be described in connection with arrays of various moieties, such as polynucleotides or DNA, other moieties can include any other chemical moieties such as biopolymers."

As such, the term "biopolymeric moieties" is fully supported by the specification. See also page 7, lines 12 – 30.

Additionally, the term "biopolymeric features of the array" refers to an array of biopolymeric features. An array of the invention is set forth at page 8, lines 21 – 33 and in Figures 1 – 3. The term "feature" is set forth at page 8, lines 1 – 6.

"An 'addressable array' includes any one or two dimensional arrangement of discrete regions (or 'features') bearing particular moieties (for example, different polynucleotide sequences) associated with that region and positioned at particular predetermined locations on the substrate (each such location being an 'address')."

Accordingly, the term "biopolymeric features of the array" is fully supported by the specification. Hence, in light of the above the Applicants assert that there is no reason that one of skill in the art would not believe that the Applicants were in possession of the claimed invention at the time the application was filed. The Applicants therefore respectfully request that this rejection be withdrawn.

Claim 32 has been rejected under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the written description requirement. The Office contends that the claim limitation "wherein each detector of the detection system detects light of a different wavelength" is not supported by the specification as filed. The Applicants, therefore, would like to direct the Examiner's attention to page 17, lines 3 – 22, wherein it is stated:

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"If more than one wavelength of emitted light is to be detected (as, for example, when different targets in the sample are labeled with labels which fluoresce at respective different wavelengths which are also different from the interrogating light wavelength), the foregoing process can be repeated with detector 150 moved to a different detection angle such as illustrated by position 150a. This movement and the value of the second detection angle can also be determined based on ID 54 in a similar manner as for the first detection angle. Alternatively, a second detector can be provided at position 150a and both wavelengths of emitted light detected simultaneously."

Accordingly, the term "wherein each detector of the detection system detects light of a different wavelength" is fully supported by the specification.

Hence, in light of the above, the Applicants assert that there is no reason that one of skill in the art would not believe that the Applicants were in possession of the claimed invention at the time the application was filed. The Applicants therefore respectfully request that this rejection be withdrawn.

Additionally, new Claims 53 – 58 are patentable because, as reviewed above, the underlying base claims from which they depend are patentably distinct from the prior art.

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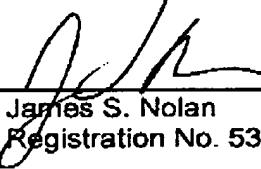
CONCLUSION

Applicant submits that all of the claims are in condition for allowance, which action is requested. If the Examiner finds that a telephone conference would expedite the prosecution of this application, please telephone Bret Field at 650 327 3400.

The Commissioner is hereby authorized to charge any underpayment of fees associated with this communication, including any necessary fees for extensions of time, or credit any overpayment to Deposit Account No. 50-1078.

Respectfully submitted,

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